

deep subcaudal circular pit, with its large, thick, prominent rim, could not have been overlooked on the most casual examination.

I have not considered it right to cut into the single specimen which we possess of this interesting genus, either to examine the consistence or form of the shell, or to describe the form, structure, and disposition of the teeth—all most important particulars, which I hope the receipt of other specimens will enable me before long to supply.

The pore near the hinder margin of the shield is deep and lined with membrane, which is swollen up and bladder-like at the base in the specimen in spirits, not showing any indication of a shell; and therefore it cannot be (as has been suggested by one zoologist, to whom I had showed the specimen) compared to the open space which is left on the upper surface of the shell by the edge of the mantle being only partially reflected over its outer surface, as in the genera *Drusia*, *Girasia*, *Mærialla*, and *Parmacellus* in the Arionidæ, and *Peltella* in the Limacidæ. It is probably more properly to be compared with the luminous gland which is said to be found, but so imperfectly and differently described as existing in the genus *Phosphorax*.

The mantle is rather produced and free in front and on the front part of the sides, but does not appear to be so free as in the European species of the genus *Limax*.

UROCYCLUS KIRKII.



Pale brown, with minute square black spots on the sides, with a black streak on each side of the back; middle of the back with two darker brown streaks. The sides of the body with diverging sunken lines. The margin of the foot with a series of small black specks.

Hab. Central Africa.

June 28, 1864.—Dr. J. E. Gray, F.R.S., in the Chair.

ON A NEW GENUS OF PEDICULATE FISH FROM THE SEA OF MADEIRA. BY DR. ALBERT GÜNTHER, F.Z.S.

Mr. J. Y. Johnson discovered during his last sojourn in Madeira, on the 24th December 1863, a fish which proves to be the type of a new genus, not only on account of its extraordinary form, but also on account of the absence of ventral fins. In the latter respect it agrees with *Ceratias* from the coast of Greenland, from which, however, it differs in its dentition.

It must be extremely rare, as the specimen entrusted to me by Mr. Johnson for description, and presented by him to the British Museum, is the only one which has ever come to the knowledge of naturalists. Neither the Rev. R. T. Lowe nor Mr. Johnson had heard of its existence, nor did the fishermen recognize it. It is evidently a deep-sea fish, inhabiting the same horizontal marine zone

as *Saccopharynx* and *Alepidosaurus*. When brought to Mr. Johnson, the belly was much distended, and contained, rolled up spirally into a ball, a Scopeline fish, which measured $7\frac{1}{2}$ inches in length, and 1 inch in depth. Nevertheless it was tempted to take a bait.

MELANOCETUS.

Head and body compressed, head very large, body small, abdominal cavity forming a sac suspended from the trunk. Cleft of the mouth exceedingly wide, vertical. Teeth of the jaws and palate long, pointed, unequal in size. Skin smooth. The spinous dorsal is reduced to a single filament placed on the head. The soft dorsal and anal short. Ventrals none. Slit of the gill-openings of moderate width, below the pectoral.

MELANOCETUS JOHNSONII.

D. 1|14. C. 8. A. 4. P. 18.

This singular fish is distinguished by a greater disproportion of the various parts of its body than is found in the other genera of the family to which it belongs. The head is of a tetrahedral form, and is the most extensive part of the whole animal. The gape is enormous; and although the lower jaw is vertical when the mouth is closed, it can be moved downwards at more than a right angle. The lateral extensibility of the mouth is not less than the vertical; so that the prey which can be received within the cavity of the mouth actually may exceed the size of the fish itself. This enormous head is followed by a very small trunk and tail, the length of both being less than the depth of the head. As the trunk would not offer sufficient room for an abdominal cavity corresponding in size to the prey swallowed, this cavity is suspended as a large sac from the lower part of the body, and floats in the water. The upper and lower jaws are armed with a series of teeth which are very unequal in length, some being very long, others small; all are very slender, and can be depressed towards the inside of the mouth: this peculiarity of the teeth may be observed in the *Lophius*, in the Pike, and numerous other rapacious fish with long slender teeth. The vomer is armed with a transverse series of single teeth, and extends across the whole width of the roof of the mouth; the palatine and pterygoid teeth are situated at some distance behind the vomer, and form two bundles irregular in form. The pharynx and œsophagus are, as might be expected, very wide. The eye is situated high up on the side of the head; it is very small, and covered by, but appearing through, the skin. There are no nasal openings. The opercular pieces are reduced to styliform rudiments; there are five branchiostegals. Only the three inner branchial arches bear short branchial lamellæ, which are disposed in a double series on the two middle ones, and in a single one on the innermost arch. The gill-opening itself is a slit of moderate width, below and behind the pectoral fin. The upper surface of the head is concave, and in the middle of its anterior portion there is situated the single filament to which the anterior dorsal

fin is reduced; this filament is more than half as high as the head, and dilated into a small lamella at its extremity. The second dorsal fin occupies the back of the tail, and is composed of fourteen simple rays, none of which are as high as the fin is long. The caudal fin is quite free from the dorsal and anal, and composed of eight very soft rays, which are bifid at the end, and form a convex posterior margin. Anal fin very short, composed of four rays only, which are opposed to the posterior dorsal rays. The base of the pectoral fin is fleshy and enveloped in skin, as in other *Pediculati*. It is composed of eighteen simple and feeble rays. Ventral fins none. Vent situated immediately behind the abdominal sac. The whole fish, even the inside of the mouth, of the abdominal sac, and of the stomach, is of a uniform deep black.

Total length (mouth closed) $3\frac{8}{10}$ inches; length of intermaxillary and of mandible $1\frac{4}{10}$ inch.

Nov. 8, 1864.—Prof. Huxley, F.R.S., V.P., in the Chair.

NOTE ON THE CLAWED TOADS (*DACTYLETHRA*) OF AFRICA.

BY DR. J. E. GRAY, F.R.S., ETC.

There has long been known a Toad that has long slender fingers to its fore feet, like the *Pipæ*, and very large webbed hinder feet, some of the toes of which are armed with very distinct horny black claws—a peculiarity of structure that is quite an exception amongst the Batrachian animals.

The specimen first observed was brought from South Africa: it was described and figured by Cuvier, in the second edition of the 'Règne Animal' (vol. ii. p. 107, t. 7. f. 3), under the name of *Dactylethra*. This author states that the animal had been before partially known; for it is figured, but without its claws, in the 'Planches Enluminées' as the male *Pipa*, I suppose on account of the form of the feet. Daudin described it under the name of the *Crapaud lisse* (t. 30. f. 1); and Merrem, in his Compilations, calls it *Pipa bufonia*. It is now generally known as the *Dactylethra capensis* of Cuvier.

Dr. Peters, when examining a specimen of this animal which he obtained from Mozambique, discovered a very small cylindrical appendage, or beard, situated on the front part of the underside of the orbit; and described it as a new species, under the name of *Dactylethra Mülleri*, in the 'Monatsber. der Berlin. Acad.' (1844, p. 37).

Dr. Hallowell, having observed the same beard under the eyes of a young specimen which he had obtained from the Gaboon through Dr. H. A. Ford, gives a long description of it, under the name of *Dactylethra Mülleri*, in the 'Proceedings of the Academy of Natural Sciences' for 1857, p. 65.

Dr. Günther, in his excellent 'Catalogue of Batrachia Salientia in the British Museum,' published in 1858, admits the two species, and appears not to have observed the minute beard under the eyes in the specimens from South and West Africa, then in the Museum collection; but when we received, in 1862, the specimen